

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (original): Method of coding a signal, in particular an audio or speech signal, wherein a codebook comprising k code vectors is provided for vector quantization of a signal vector representing a set of signal values of said signal, performing a codebook search for determining an optimal code vector of said codebook, wherein said codebook search is performed in parallel by dividing said codebook into p codebook groups, by simultaneously determining p optimal group code vectors each of which corresponds to one of said p codebook groups, and by determining said optimal code vector among said p optimal group code vectors.
2. (original): Method according to claim 1, wherein said step of determining said optimal code vector among said p optimal group code vectors comprises evaluating an index of each optimal group code vector uniquely identifying each optimal group code vector within said codebook.
3. (original): Method according to claim 1, wherein said vector quantization is of the shape-gain type.

4. (currently amended): Method according to ~~one of the preceding claims~~claim 1, wherein a comparison of code vectors is performed within said codebook search, wherein said comparison is based on a cross multiplication expression

$$C_t * E_{best} >< E_t * C_{best},$$

which is based on fixed point operations and leads exactly to the same result as a standardized serial algorithm, wherein C_t is a so-called cross term corresponding to a t-th code vector and C_{best} is the cross term corresponding to a temporarily best code vector, and wherein E_t is a so-called energy term corresponding to said t-th code vector and E_{best} is the energy term corresponding to said temporarily best code vector.

5. (currently amended): Method according to ~~one of the preceding claims~~claim 1, wherein said method is based on a code excited linear prediction algorithm comprising a synthesis section, and wherein elements of a matrix representing a transfer function of at least one filter of said synthesis section, and/or elements of auto-correlation matrices used within said CELP-algorithm and/or further precalculation and postcalculation steps for a/said comparison of code vectors are generated/evaluated in parallel.

6. (original): Method according to claim 1, wherein said codebook comprises pulse code vectors.

PRELIMINARY AMENDMENT
Attorney Docket No. Q76413

7. (original): Method according to claim 1, wherein a processor with configurable hardware and/or with acceleration means specifically designed for said method is used for parallel execution of steps of said method.

8. (original): Method according to claim 7, wherein said processor provides means for simultaneously accessing a plurality of said signal values located in a memory.

9. (original): Method according to claim 1, wherein a standard processor, in particular a digital signal processor, is used for parallel execution of steps of said method, and wherein said steps of said method are optimized regarding calculation means of said standard processor and/or execution time.

10. (currently amended): Processor capable of performing a method according to ~~any of the preceding claims~~ claim 9.

11. (original): Coder and decoder, in particular speech and/or audio signal CODEC, capable of performing a method according to claim 1.